

Progressive hypoalbuminemia during continuous ambulatory peritoneal dialysis: single centre report

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Background: Hypoalbuminemia is an independent risk factor for mortality and is associated with malnutrition. One of the factors involved in the etiology of hypoalbuminemia and malnutrition is dialysate protein loss during CAPD.

Objective: We report the characteristic of serum albumin, one of the nutritional indicators, in patients with the course of CAPD for at least 5 years. **Methods:** A retrospective analysis was done on CAPD patients who started CAPD during 1 May 1993 to 31 December 1997. The serum albumin level was monitored for 5 years. **Results:** 56 patients were included. All were on CAPD with Dianeal. Age, gender, and peritoneal transporter status distribution were normal. There was no significant difference in the serum albumin and residual renal function on commencement of CAPD. Serum albumin decreased with time. The decrease is marked at the 5th year. Thirteen (23%) patients died in the 6th year.

Year recruit	Average serum albumin at the end of Year...					
	0	1	2	3	4	5
1993	36	35.7	34.5	34.7	34.3	32.2
1994	35.5	35.3	36	35	35	33
1995	36	35.3	36	35	35	32.2
1996	36.8	34.9	34.4	34.2	34.1	32.2
1997	36	35.2	35.5	35	35	32.2

Conclusions: Hypoalbuminemia sets in with progression of CAPD. Whether a timely use of amino acid dialysis solution for hypoalbuminemia benefits in maintaining nutrition with improving survival on CAPD may deserve consideration.

Dietary phosphorus control in ESRD patients on hemodialysis (HD): nursing perspectives

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Background: Uremic calcification sets in with increased serum phosphorus during the progression of renal failure. Blood biochemistries of all patients on regular HD in the locality are audited monthly to allow early medical management and nursing intervention. **Objective:** Recognizing dietary intake constitutes the source of phosphorus, this study aimed (1) to identify dietary characteristics of HD patients with suboptimal phosphate control despite drug therapy and continuous education, (2) to formulate nursing action plans for better dietary phosphorus controls. **Methods:** Blood results of all stable HD patients during the period September 2003 to August 2004 were censored. GpA patients had an average serum phosphate exceeding 2.2 mmol/L. Those below 2.2 were included in GpB. All were censored by the 'Appetite and Diet Assessment tool for use with HD patients'. **Results:** There were 13 patients in each group with normal age and gender distributions, all adequately dialyzed and anemia optimally corrected. All claimed good drug compliance and adequate knowledge on phosphorus restriction. Average serum calcium/ phosphate was 2.44/2.60 and 2.42/1.80 mmol/L in GpA and in GpB. The frequency of eating-out were comparable. 54% in GpA while 85% in GpB rated their appetite very good or good, others rated fair or poor. 61.5% in GpA and 15% in GpB cooked by themselves and eat with others. There was no significant difference in the habit of taking snacks between meals in the two groups. **Conclusions:** Appropriate suggestions on cooking habits with enforcement in phosphorus control may be a determinant nursing intervention in uremic calcification control for HD patients. The psychosocial element of cooking to eat 'normally' with others may be an area for research.

Effect of pre-dialysis education class on patients suffering from chronic kidney disease: role of nephrologists in pre-dialysis renal care

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Objective: Regular pre-dialysis education classes (PEC) were delivered to patients suffering from chronic kidney disease (CKD) before the start of routine dialysis in a regional hospital. We assessed the effect of PEC on CKD patients.

Methods: This was a prospective observational study. 12 PECs were organized from 1996 to 2000. 107 (44 male, 63 female) CKD patients and their families who attended PEC (group A) were compared with 285 CKD patients (147 male, 138 female) who did not attend PEC (group B) before their enrollment into the CAPD program. Both groups underwent the same structured PD training after Tenckhoff catheter insertion. Patients were evaluated at the break-in period, and 3 and 6 months after the commencement of routine dialysis. **Results:** During the break-in period, the requirements of intermittent hemodialysis (IHD) support and hospitalization rate (HR) were significantly higher in group B when compared with group A (IHD: 4.6 ± 6.6 in group A and 6.7 ± 8.2 in group B, $p < 0.01$; HR: 12.2 ± 13.7 days in group A and 20.5 ± 16.1 days in group B, $p = 0.02$). There were also more non-scheduled nephrologist consultations (NSFU) in group B patients, both at 3 and 6 months after commencement of PD, although it did not reach statistical significance ($p = 0.06$). **Conclusions:** PEC reduces the need for early hospitalization and IHD support in the break-in period. The effect seems persistent as long as 6 months after commencement of PD as reflected by the lower needs of extra NSFU.

Interleukin-2 receptor antagonist improves early post-transplant renal function: results from single center experience

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Objective: International studies have shown that interleukin-2 receptor antagonist (IL2RA) is effective in preventing acute rejection in renal transplant recipients (RTR). We conducted a single center prospective study to assess its efficacy in Chinese RTR. **Methods:** All RTR treated with IL2RA in a tertiary transplant hospital were recruited from 1999 to 2001 (group 1). Its efficacy was assessed by comparing with RTR who were either treated with anti-thymocyte globulin (ATG) as induction therapy or without induction therapy from 1997 to 2001 (group 2). **Results:** Group 1 comprised 24 RTR (13 male, 11 female) while group 2 recruited 33 controls (19 male, 14 female). Creatinine upon hospital discharge was lower in group 1 ($220 \pm 127.4 \mu\text{M}$) compared with group 2 ($356 \pm 340.9 \mu\text{M}$) ($p = 0.02$). There was also a trend of lower serum creatinine at 6 and 12 months after renal transplantation but it did not reach statistical significance. The initial post-transplant length of stay and first year hospitalization rate as well as complications including the development of acute and chronic rejections, patient and graft survival within 2 years and post-transplant infection and malignancy showed no significant difference. The incidence of biopsy proven acute rejection was 16% in group 1 compared to 9% in group 2 ($p > 0.05$). **Conclusions:** IL2RA is effective in Chinese RTR with improvement of serum creatinine after renal transplantation without increasing the risk of complications and hospitalizations.